WHAT IS CLAIMED IS:

1. A method of automatic determination of a color scanning mode for a scanner, comprising:

determining whether a black-and-white scanning mode is appropriate according to

5   an image data previewed by the scanner;

performing a black-and-white scan when the black-and-white scanning mode is appropriate;

determining whether a gray scale scanning mode is appropriate when the black-and-white scanning mode is not the appropriate scanning mode;

10   performing a gray scale scan when the gray scale scanning mode is the appropriate scanning mode; and

performing a color scan when the gray scanning mode is not the appropriate scanning mode.

2. The method according to claim 1, the step of determining whether the black-

15   and-white scanning mode is appropriate further comprising:

dividing pixels of the image data into a low brightness area and a high brightness area;

calculating a low brightness mean value and a low brightness standard deviation from the low brightness area;

20   calculating a high brightness mean value and a high brightness standard deviation from the high brightness area; and

when the low brightness mean value and standard deviation are smaller than predetermined low brightness mean value and standard deviation, the high brightness mean value is larger than a predetermined high brightness mean value, and the high brightness

standard deviation is smaller than a predetermined high brightness standard deviation, the

black-and-white scanning mode is appropriate.

3. The method according to claim 1, the step of determining whether the gray scale

scanning mode is appropriate further comprising:

5   obtaining a brightness sum of a red color brightness, a green color brightness, and a

blue color brightness of a plurality of pixels obtained by a preview scan;

obtaining a brightness displacement by calculating a sum of an absolute value of

deducting the red color brightness with the brightness sum, an absolute value of deducting

the green color brightness with the brightness sum, and an absolute value of deducting the

10   blue color brightness with the brightness sum for each pixel;

adding the brightness displacements of all the pixels to obtain a total red, green, and

blue brightness displacement; and

performing a gray scan when the total red, green, and blue brightness displacement

is smaller than a predetermined red, green, and blue brightness displacement of the scanner.

15   4. The method according to claim 3, wherein the red, green and blue brightness of

each of the pixels is obtained from the total red, green, and blue brightness divided by 3,

and the total of the red, green and blue brightness displacement of the pixels is obtained by

summing together each red, green, and blue brightness displacement divided by 3, and

when the total red, green and blue brightness displacement is smaller than a predetermined

20   displacement value, the scanning mode is changed to a gray scale scanning mode.